them teeth, the thinner shells being as clear of teeth as a typical *Mesodon*, and only the old thickened shells have the obsolete teeth. They attain a size somewhat larger than the largest specimens of *inflecta* in the Binney collection.

Prof. Call believes them to be *Triodopsis appressa minor*, but they seem to me to be nearer *inflecta* than *appressa*, and if not a distinct species, they certainly are a well-marked variety.

NOTES ON THE VARIATION OF CERTAIN MOLLUSCA INTRODUCED FROM EUROPE.

BY T. D. A. COCKERELL.

As I have urged when writing of *Helix nemoralis*, few subjects can be more interesting to the conchologist than the effect of environment on species, which is seen so frequently in the case of variable species introduced into new countries.

Through the kindness of Mr. W. G. Binney and Prof. J. H. Morrison, I have been enabled to examine specimens of several species of European Mollusca introduced into this country, and to refer them to various varieties already known in Europe, but mostly so far not recognized in the American fauna.

(1.) **Agriolimax agrestis** (L.) var. **Sylvaticus.** (Moq., non Drap.)

This is the mottled form of the species, and appears to be the prevalent form at Burlington, New Jersey, whence Mr. Binney has sent me several living examples. One of these is unusually large, being 53 mill. long.

(2.) **A. agrestis** var. **typica.** (Less. & Poll.)

This is the spotless type, of which I found a single example at St. Thomas, Ontario, Canada, in 1887.

(3.) **A. agrestis** var. **reticulatus** (Moq.)

Resembles var. *sylvaticus*, but is reddish-ochre with black irregular spots, often tending to reticulation on the body. Sent from Burlington, N. J. (Mr. Binney).

(4.) **Limax** (**Lehmannia**) **variegatus** Drp. var. **flavus** Moq. (=L. **flavus** "L." Auctt.)

Lexington, Va., one example from Prof. Morrison.

(5.) **Limax maximus** "L.," Auctt., var. **vulgaris** Moq.

This has the dorsal black bands continuous. One from Lexington, Va. (Prof. Morrison).

(6.) **L. maximus** var. **cellarius** D'Argentville.

The bands on the back interrupted at intervals. Fifteen specimens, some tending toward var. *ferussaci* Moq., from Lexington, Va. (Prof. Morrison).

(7.) **L. maximus** var. **maculatus** Picard.

The back with black spots irregularly placed. One very nice one from Burlington, N. J. (Mr. Binney).

(8.) **Helix nemoralis** L.

Mr. Binney has sent me several living examples from Burlington, N. J., among which the var. *rubella* greatly preponderates, *guettardia* and *cuvieria* being the only other varieties represented. It is here interesting to notice, that at Burlington, where the species has been long established, it varies *much less* than at Lexington. The red forms so rare at Lexington, largely preponderate in the Burlington sendings.

Prof. Morrison has lately sent me several more varieties from Lexington, ten being new, and two already recorded in Europe. These latter are var. *requienia* Moq. (=*petiveria* 10345) and var. *libellula* 1(234)5 Kreglinger. The new ones will be recorded later.

(9.) **Helix hispida** var. **concinna** (Jeffreys).

Mr. Binney sent me a shell found at Montreal, referable to this form. It is pale horn color, max. diam. $8\frac{3}{4}$, alt. $4\frac{3}{4}$ mill. *H. concinna* was considered by Dr. Gwyn Jeffreys a valid species, but it cannot be separated on sufficient grounds from *H. hispida* L.

(10.) **Helix cantiana** Mont. var. **minor** Moq.

Mr. Binney has sent me an example which he received from Mr. F. R. Latchford, labelled "Citadel, Quebec, Aug. 12, 1886." It is smaller and thinner than the type, with the least tinge of red outside the outer lip. Max. diam. 15, alt. 10 mill. Figured in Bull. Mus. Comp. Zool. Vol. xiii, No. 2 (1886). Pl. I, fig. 13. This form, which I believe is very constant in its characters, is a variety of *Helix galloprovincialis* Dupuy, which, however, is itself undoubtedly a variety of *H. cantiana*.

West Cliff, Custer Co., Colo., Nov. 6, 1889.